



# BUILDING CONFIGURATOR

## A SUSTAINABLE SOLUTION

# AGENDA

- **What is modular construction?**
- **Worldwide examples**
- **Conventional vs Modular Construction (pros and cons)**
- **Modular Construction Process and Sustainability**
- **The factory**
- **The Paradigma – Developing a Concept**
- **The Concept – Building configurator**

# WHAT IS MODULAR CONSTRUCTION?

- **Modular construction refers to a construction method by which most of the work which is usually carried out on site is finished in the factory where modular units are produced. Such modular – units are then transported, to the building site. This new approach enables drastic reduction of site work time.**







**Think modular construction as a “process” of construction not a “product”. Using this process, you can build all types of buildings.**

**Residential; health facilities; tourism/hotels; offices; schools ...**

**With different types of structures - wood, metal and precast concrete**



# WORLDWIDE EXAMPLES



Wood modules  
Housing



Modultec

Steel modules - Offices



Concrete modules Housing



Steel modules - School

Modultec

# WORLDWIDE EXAMPLES

Hotels



Healthcare



Offices

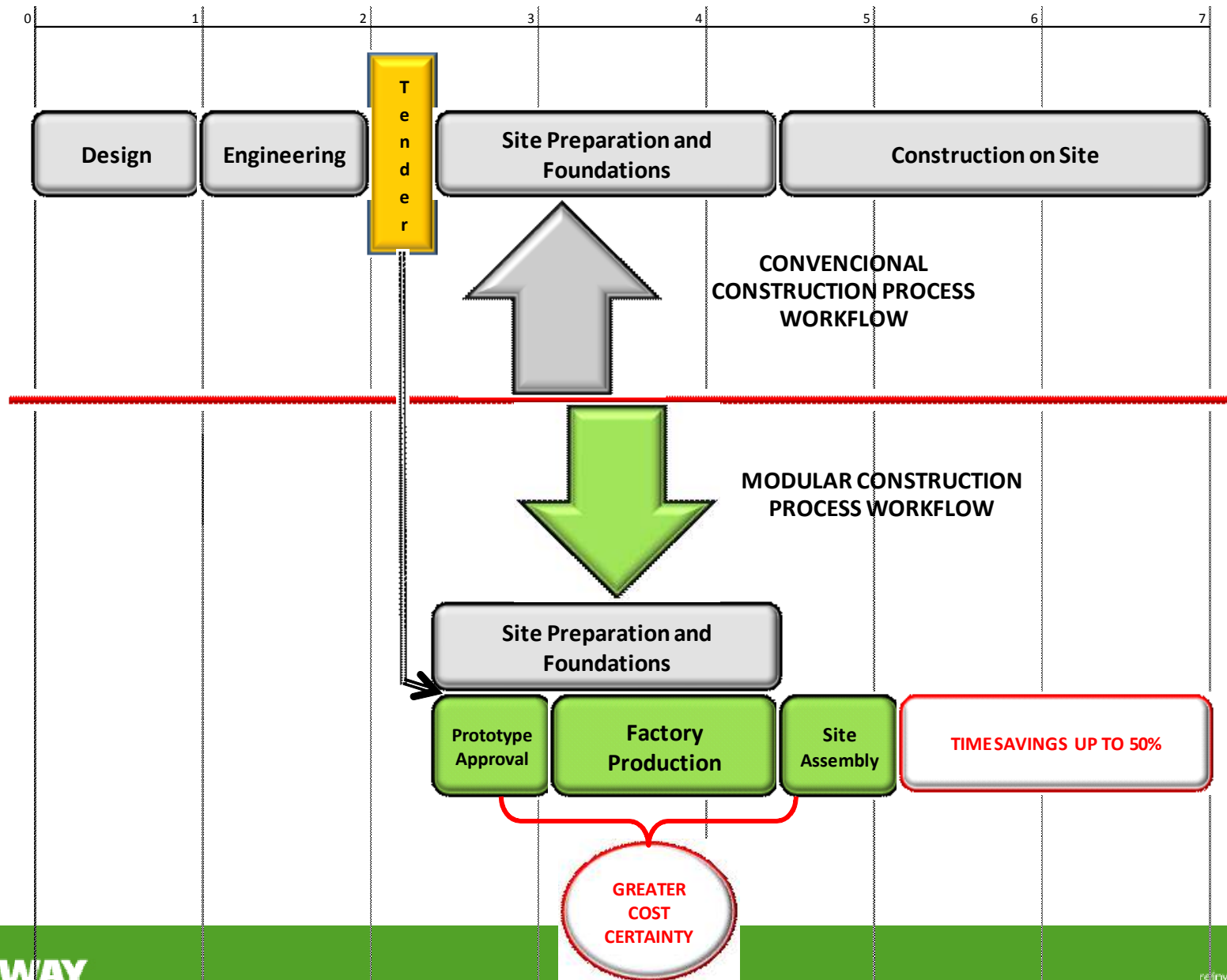
# CONVENTIONAL vs MODULAR CONSTRUCTION

CONVENTIONAL “WISDOM”	
OVER BUDGET	SCOPE OF WORK DEFINED DURING EXECUTION – EASY TO CHANGE
TIME DELAYS	INCONSISTENT QUALITY UNPREDICTABLE WORKFORCE DAYS OF REWORK BAD WEATHER
WORKSITE	NOISE & DUST & TRAFFIC LABOUR FORCE – SAFETY PRACTICE

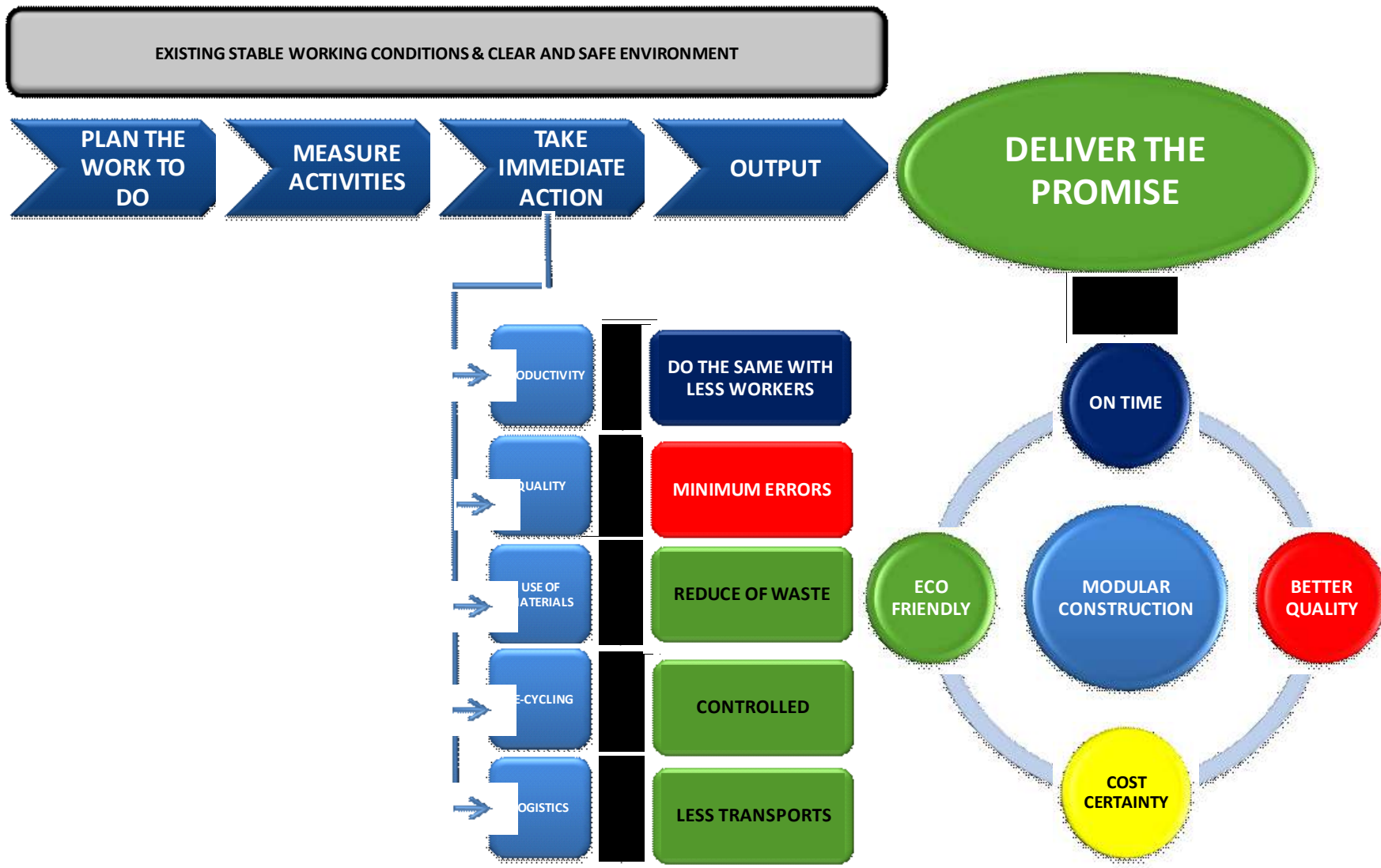


# MODULAR “WISDOM”

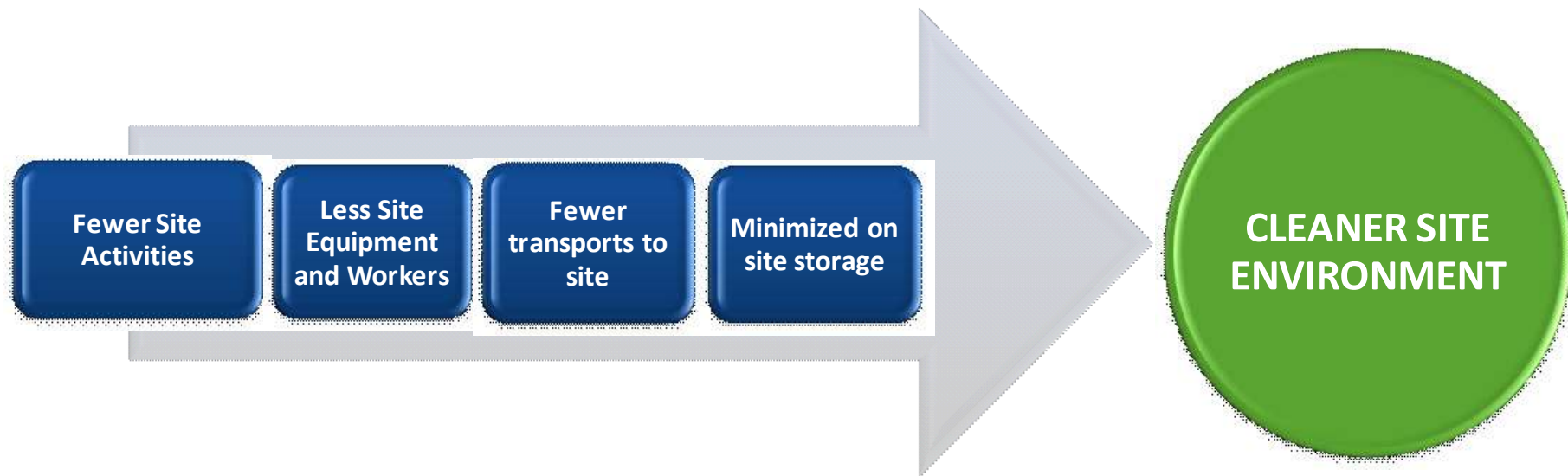
# Time schedule



# Modular Factory

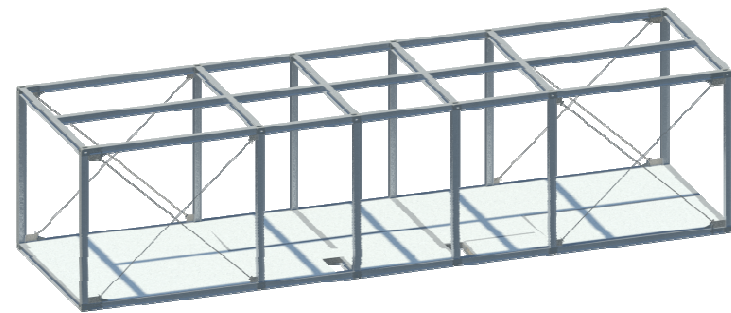
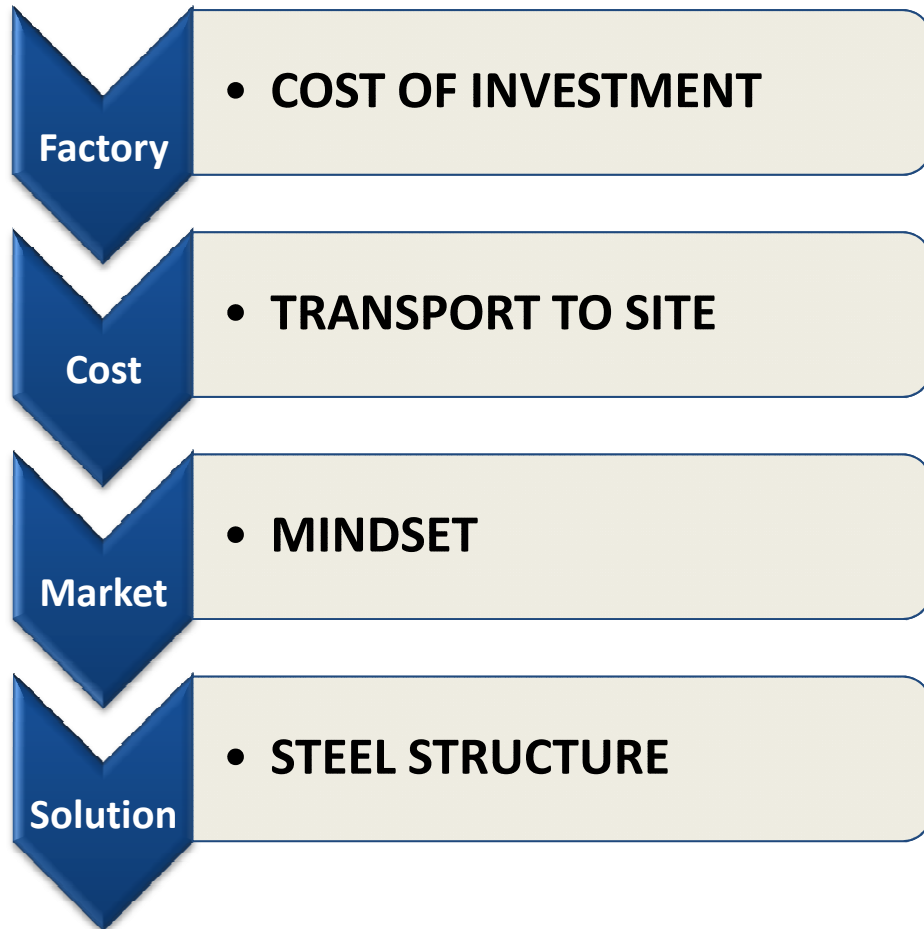


## On site

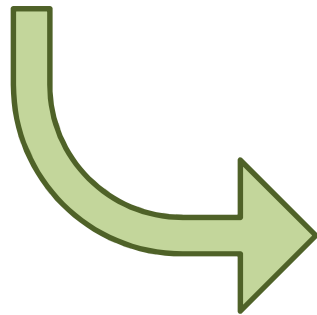




## MODULAR "WISDOM" – DISADVANTAGES



“The life cycle expectancy of modular construction” is the same as conventional , and in a world where sustainability is gaining momentum each day , there are also several basic principles intrinsic to modular construction process that are more *eco-friendly* than conventional construction.



# WHY ?

## *Eco-friendly* - why ?

- Modular construction uses a process with efficient use of materials – factory waste is typically less than 1,5% compared with more than 10% on a traditional construction site .
- Greater accuracy allows components to be ordered in exact sizes resulting in reduced waste than “ cut to fit” activities .
- Sheltered construction and storage results in less water - related waste
- Storage – is safe and clean
- Manage Re-cycling program – waste segregation and recycling is simpler in sheltered construction condition
- Demountable – Modular construction can be taken down and used again.
- Less transports



Life  
Cycle

# Life Cycle





[HTTP://WWW.YOUTUBE.COM/WATCH?V=OWPN1HHIX1A&FEATURE=M  
FU IN ORDER&LIST=UL](http://www.youtube.com/watch?v=OWPN1HHIX1A&feature=MFU_IN_ORDER&list=UL)

## THE PARADIGM - DEVELOPING A CONCEPT

### Volkswagen Passat



2006–2010 Volkswagen Passat B6

**Manufacturer** Volkswagen Passenger Cars

**Also called** Volkswagen Dasher  
Volkswagen Quantum  
Volkswagen Santana  
Volkswagen Corsar  
Volkswagen Magotan  
Volkswagen Carat

**Production** 1973–present

**Predecessor** Volkswagen Type 4  
Volkswagen Type 3  
Volkswagen K70

**Class** Large family car / Mid-size car

**Layout** Front-engine design

**Platform** Volkswagen Group B platform series

DIFFERENT  
CARS SHARE:  
Platform  
Engine  
Components

### Audi A4



**Manufacturer** Audi AG

**Production** 1994–present

**Assembly** Ingolstadt, Germany  
Changchun, China<sup>[1]</sup>  
Tokyo, Japan (AMA; B5 only)  
Jakarta, Indonesia (Garuda Mataram  
Motor; B8 only)  
Solomonovo, Ukraine (Eurocar; B7  
only)  
Aurangabad, India

**Predecessor** Audi 80

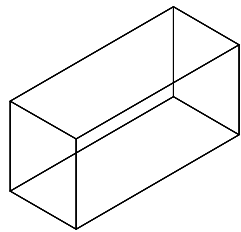
**Class** Compact executive car

**Layout** Front engine, front-wheel drive or  
four-wheel drive

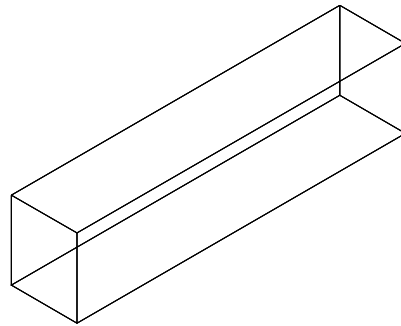
**Platform** Volkswagen Group B

THE CONCEPT

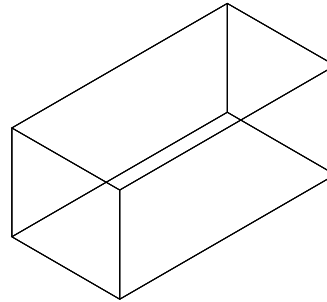
# BUILDING CONFIGURATOR



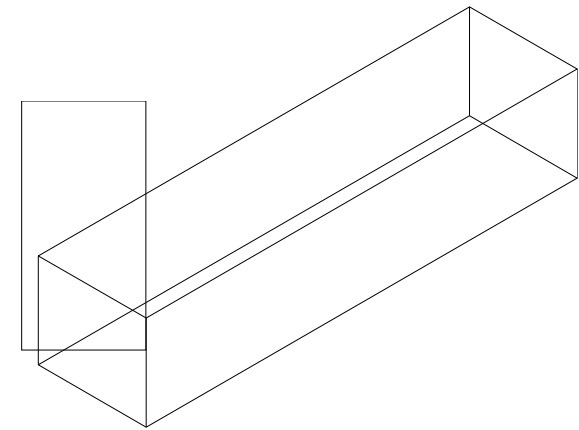
DIN HS 20' HC



DIN HS 40' HC

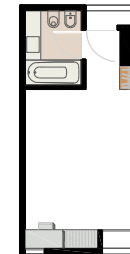
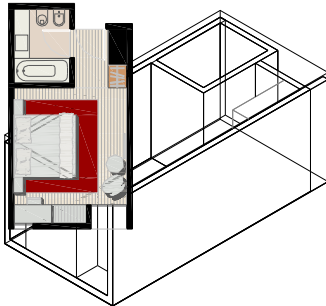


ONT(8.00x4.00m)



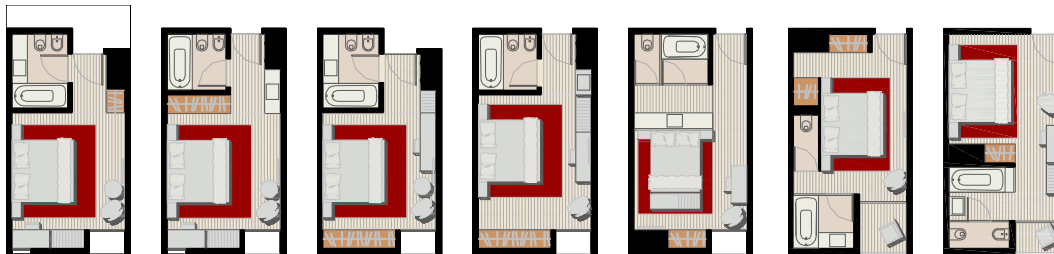
ONT(16.00x4.00m)

# THE CONCEPT BUILDING CONFIGURATOR



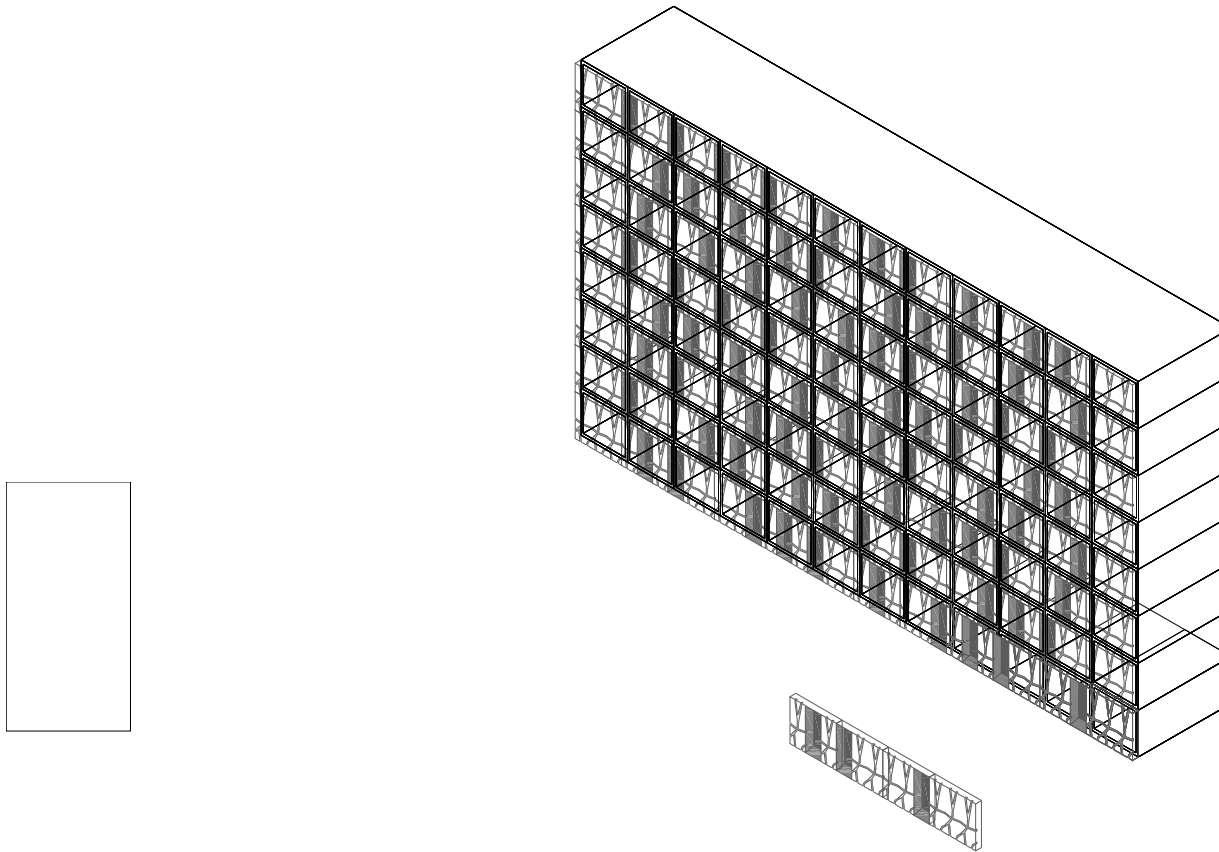


# THE CONCEPT BUILDING CONFIGURATOR

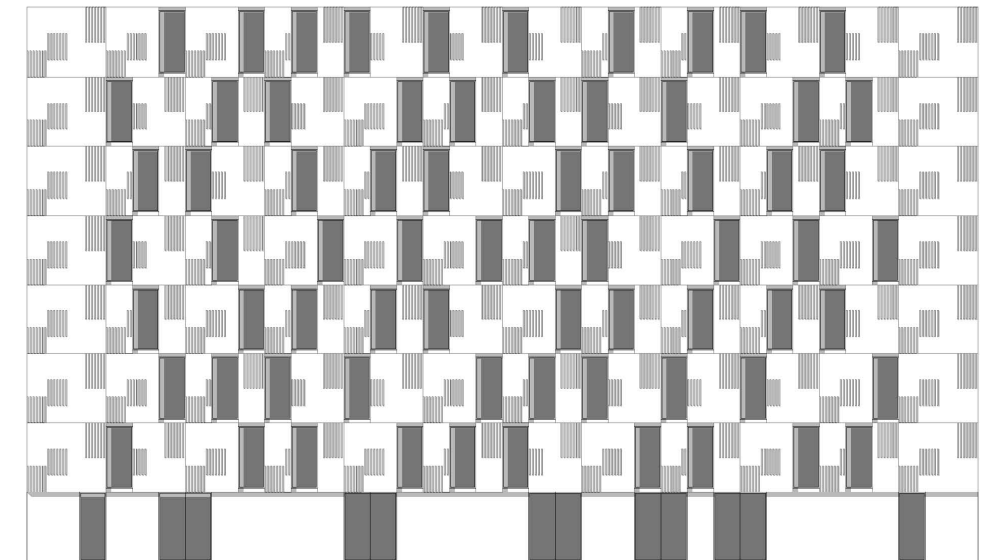


THE CONCEPT

# BUILDING CONFIGURATOR



# THE CONCEPT BUILDING CONFIGURATOR



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